TOP SECRET

IMAGERY
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DIVISION

PIR

PHOTOGRAPHIC INTELLIGENCE REPORT

SEVERODVINSK NAVAL BASE AND SHIPYARD 402, SEVERODVINSK, USSR

25X1

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CIA/AIR 67041

25X1

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SEVERODVINSK NAVAL BASE AND SHIPYARD 402,

SEVERODVINSK, USSR

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INTRODUCTION

I. BACKGROUND

This study is in partial response to a continuing project requiring the identification of ships at selected Sino Soviet Bloc shipyards from overhead photography.

Severodvinsk Shipyard 402 is of the highest intelligence priority since it is the lead yard engaged in the production of Soviet nuclear attack and missile submarines.

KEYHOLE provided by far the best quality large scale (KH-7) satellite photography of this yard - permitting the first detailed photo interpretation of this installation since World War II.

25X1

II. SCOPE OF THIS REPORT

Because of the importance of this installation and the excellent quality of the KH-7 photography obtained of it the following additions have been made to the standard project reporting format:

a. The text has been greatly expanded to encompass a more detailed description of specific items of interest.

b. Line drawings have been utilized to illustrate in greater detail those items of greatest significance.

c. The most significant information has been summarized in highlight form - extracts from which have been pre-released via cable.

III. MENSURAL AND GRAPHIC INFORMATION

All measurements, either specifically stated in the text of this report or used to annotate the line drawings, were derived by the Technical Intelligence Division, NPIC; they are considered accurate within plus or minus five feet or five percent, whichever is greater.

25X1

All line drawings, with the exception of Figures 4e and 5b, have been drawn to a rough scale of approximately one inch to fifty feet. Figures 4e and 5b have been drawn to a rough scale of approximately one inch to twenty-five feet.

Whenever the location of end points could not be determined with full confidence the imagery in question has been depicted in the line drawings by means of a dashed line.

Obliquity or lack of sharp waterline contrast precluded observation of the actual waterline beam of nearly all the submarines.

The actual maximum beam on each of the two submarines in the floating docks could not be determined due to probable scaffolding. Questionable end points also precluded an accurate determination of certain imagery observed on the visible deck of these two ships.

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SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 039-50E

HIGHLIGHTS

1. Extensive modification of the ballistic missile system is apparently in progress aboard the "G" Class SSB berthed along the fitting-out quay of the north (Yagry Island) repair facility. This evaluation is based upon the height, from the deck, of each of the three exposed missile tubes [redacted] lower than the tubes aboard the standard "G" Class. The height of the partially dismantled sail area forward of the tubes is roughly [redacted] Lack of outer side panels on either side or aft of the missile tubes also suggests that extensive modification work has yet to be performed on this submarine. (See annotation 5, Figure 6.)

2. Six cylindrical sections, having maximum outside diameters ranging [redacted] (approximate) are placed adjacent to a quay on the south side of Nikolskoye Estuary east of the main launch basin. Based on size, shape and location (at a shipyard constructing submarines) the most reasonable identification of these objects is that they are submarine hull sections. Lengths of each of these sections vary [redacted] Five of the sections are placed on their transverse (upright) axes; several small holes can be seen within the rim of one of these sections. The sixth section is lying along its longitudinal axis and is slightly tapered at one end. A very large floating crane is observed alongside the quay within working radius of the six sections. (See annotation 5, Figure 5.)

3. Nuclear submarine refueling (recoring) can be established as a major function of the Nuclear Submarine Special Support Facility, Yagry Island. Evaluation is based, in part, on the presence at this facility of a specialized naval auxiliary ("PM-124") - a ship most likely having a nuclear support mission - and the observation of a structure on the quay similar to the spent fuel handling structures ("M-130" houses) seen at U.S. naval nuclear refueling facilities. (See annotations 7 and 9, Figure 8.)

4. Uniquely configured special support barges [redacted] service each of the eight nuclear submarines observed at the shipyard. Lines, including possible piping and/or cables, lead from several of the submarines at the fitting-out quay (Main Yard) to companion barges berthed between each of

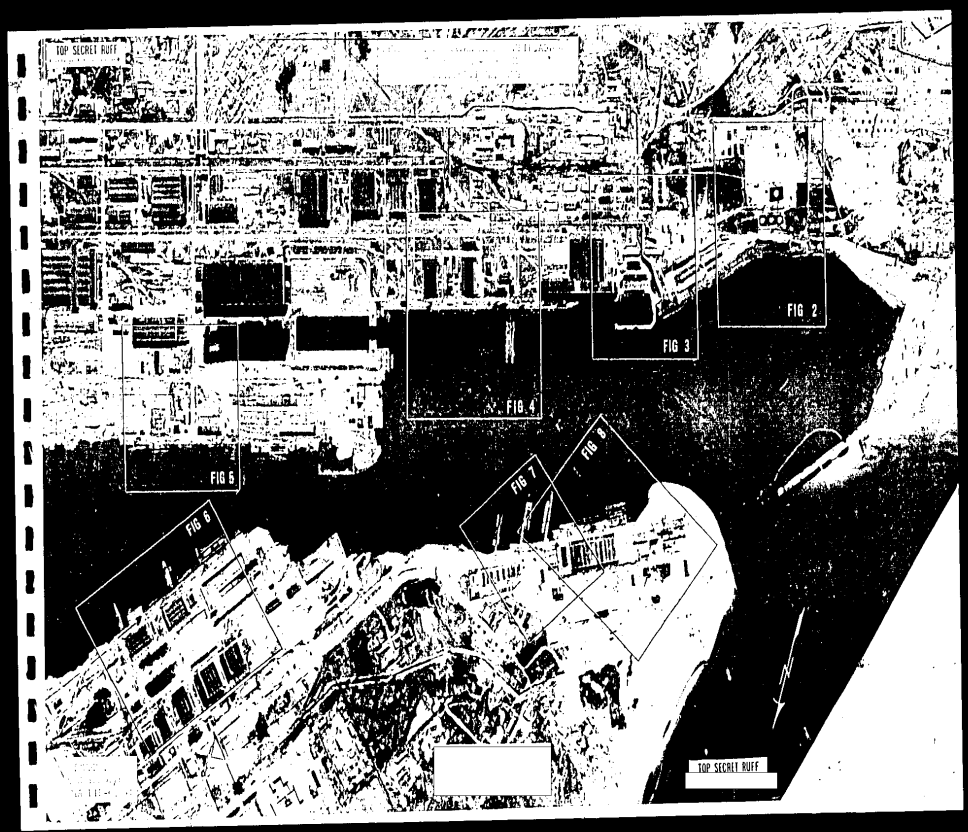
these submarines and the main quay. A probable decontamination (DECON) / radio-active control (RADCON) function can be ascribed to each of the two barges servicing the submarines at the Nuclear Submarine Special Support Facility, Yagry Island. No barges of this type are located alongside any of the four conventionally powered submarines observed at this shipyard. (See annotations 1, 3, 6, 10 and 14, Figure 4; annotation 12, Figure 6; and annotations 3 and 5, Figure 8.)

5. Additional photo/mensural analysis has led to a more conclusive identification of each of the submarines observed in the two large floating docks at Severodvinsk.

a. A scaffolded "N" Class SSN (with an approximate visible length over-all of [redacted] occupies the floating dock placed perpendicularly to the fitting-out quay of the Main Yard. (See annotation 9, Figure 4.) 25X1

b. The floating dock alongside the fitting-out quay, North Yard (Yagry Island), contains an "H" Class SSBN; the approximate length over-all of this submarine from the after edge of the vertical stern fin to the leading edge of the forwardmost shed over the bow is no greater [redacted] (See annotation 15, Figure 6.) 25X1

6. Floating vertical security screens, each roughly 50 feet in length, are positioned along the outboard sides of most of the elevated missile launchers aboard the "E-II" Class SSGN's berthed alongside the fitting-out quay of the main yard. (See letter symbols to annotations 2, 4 and 7, Figure 4.)



25X1
25X1

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25X1

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25X1

SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N - 39-50E

KEY TO ANNOTATIONS ON FIGURE 2

1. Unidentified small YAG.
2. KYNDA Class DLGM (LOA 25X1
3. Two probable TOPLIVO-1 Class YO (visible LOA 25X1
4. "J" Class SSG with both sets of missile exhaust deflector/port covers removed. 25X1
5. Probable TOPLIVO-2 Class YP (visible LOA 25X1

25X1

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SEVERODVINSK NAVAL BASE & SHIPYARD 402
64 35N - 39 50E
SEVERODVINSK, USSR
(WEST QUAY)

25X1

FIGURE 2

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25X1

TOP SECRET RUFF

25X1

25X1

25X1

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25X1

SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 39-50E

KEY TO ANNOTATIONS ON FIGURE 3

1. Two unidentified heavy, angular, arch-shaped objects standing upright at right angles to one another on corner of quay by construction hall. Maximum (base) length and maximum span across the top of the object furthest from the launching way are approximately respectively.

25X1

2. Unidentified object on launching way. Approximate dimensions are as follows: maximum length This object is blunt (or "sawed-off") at one end and "pinched", narrowing to approximately on the end closest to the construction hall doors. Several unidentified topside details, including one centrally positioned "slot" approximately 15 feet in length, are visible on this object. The object does not appear to be resting on cradle, but rather, is apparently supported by a series of four blocks or pedestals spaced at intervals of approximately 60 feet and 85 feet. Three probable blocks or pedestals (symbols A, B, and C. annotation 2) are located in a line parallel to, and approximately unidentified object closest to the water. (For a detailed line drawing of this object see Figure 3a.)

25X1

25X1

25X1

3. Small transporter dock . Dock contains two unidentified small craft.

25X1

4. Large Missile Target Barge (YAGT) -

25X1

5. Possible Floating Workshop (YR) -

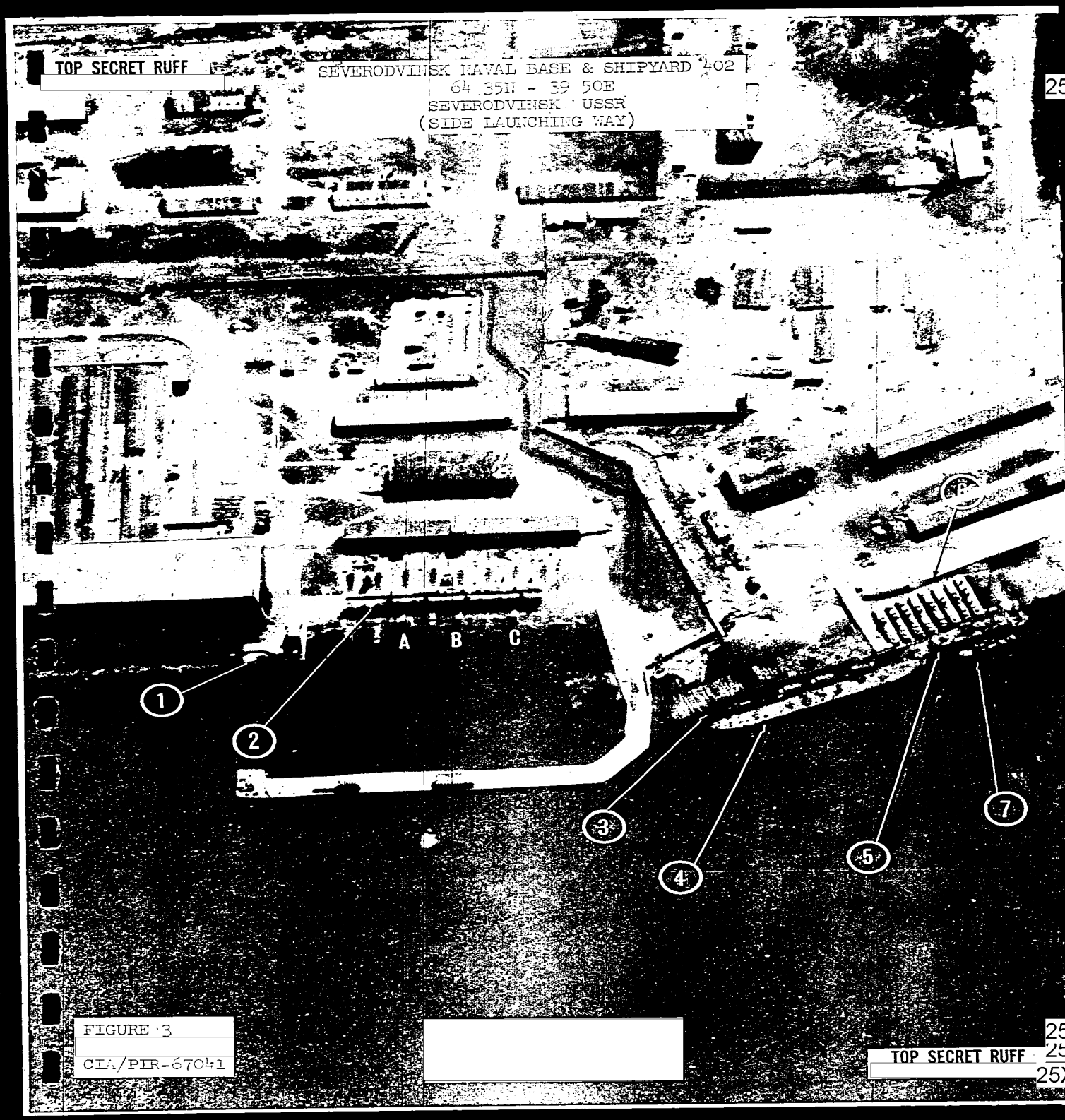
25X1

6. Eight Polish "TR-40" Class MSB (LOA approx 90') on quay.

7. Possible POZHARNEY-1 Class YTR

25X1

25X1



25X1

FIGURE 3

CIA/PIR-67041

25X1

25X1

25X1

SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 39-50E

KEY TO ANNOTATIONS ON FIGURE 4

1. Rectangular service barge
Barge has an irregularly shaped superstructure for approximately three-fourths of its length. The leading edge of the barge is in line with the leading edge of the sail of the E-II SSGN berthed alongside it.

2. E-II Class SSGN (waterline
All but the aftermost set of missile launchers are elevated. Three vertical screens (symbols A, B, and C, annotation 2), each approximately 50 feet in length, are placed along the outboard side of the submarine directly in line with three of the launchers. All four sets of exhaust deflectors are uncovered. The submarine is secured to quay by means of bow and stern lines. A probable mooring buoy is positioned on the port quarter of the submarine just abaft the #4 exhaust port. A water disturbance is located along the port quarter and along the port side of the submarine by the #1 launcher. A white line, possibly a cable or piping, leads from the edge of the quay, up and over the barge inboard of the sub, and down the outboard side of the barge where it is lost in the shadows at a point in line with the second set of exhaust ports on the submarine. A goosenecked portal crane is working on the quay alongside the E-II Class SSGN. (For a detailed line drawing of items 1 and 2 above refer to Figure 4a.)

3. Rectangular service barge (
Superstructure configuration differs from that observed on barge alongside first E-II (annotation #1 above). Main superstructure is approximately a possible stick mast and a small possible crane are located at opposite ends of this superstructure. The possible crane is located in line with the spacing between the number two and three launchers on the submarine. A small structure is located near each end of the barge. The leading edge of the barge is in line with the leading edge of the sail of the E-II SSGN berthed alongside.

4. E-II Class SSGN (waterline length approx 365').
All four sets of missile launchers are elevated. Covers are not present on the last three sets of missile tube exhaust ports; the status of the forward ports cannot be determined. Two vertical floating screens (symbols A and B, annotation 4) shield the forward two-thirds of the first

and third missile launchers from observation from the estuary. Two possible stern lines lead from the submarine to the quay. Two bow lines are visible leading into the water. The stern of this submarine is securely positioned between two staggered probable mooring buoys. A probable water disturbance is located along the port quarter of the submarine and also along the port side by the number one launcher. A white line, possibly a power cable, is visible leading from a point on the deck of the submarine located approximately abaft the after edge of the number two port exhaust deflector. From the submarine this line is hung along the outboard side of the barge superstructure - then snakes across the top of the barge and apparently drops down the inboard side of the barge to the quay below. (For a detailed line drawing of items 3 and 4 above refer to Figure 4b.)

5. Small unidentified barge

6. Rectangular service barge (LOA approx 190').
Topside configuration differs from that seen on items 1 or 3 above. Barge is moored inboard of an E-II SSGN in nearly the same position relative to the submarine as the two barges previously described.

7. E-II Class SSGN (waterline
The numbers 2, 3, and 4 missile launchers are elevated. The number 1 missile launcher is obscured by shadow cast from a dockside crane. Vertical floating screens (symbols A, B, and C, annotation 7) are located alongside and outboard of the number 1, 3, and 4 missile launchers. Missile exhaust port covers are not present on the last two sets of ports: crane shadows obscure the forward two sets of port covers. Possible bow and stern lines lead to the quay. A white line is faintly visible in approximately the same position on this submarine as the possible power cable observed leading from the deck of the E-II SSGN (item 4) discussed above. Shadow from a crane obscures the line on top of the barge. An unidentified crane is located on the quay in line with the after edge of the submarine's sail. Topside details of annotations 6 and 7 above are partially obscured by extensive shadow cast by large cranes on quay.

8. Large floating dock.
Approximate dimensions for this dock are as follows: LOA of walls - 425'; maximum (outer) inner dock width - 70'. A small crane is visible on top of each wall of the dock.

9. "N" Class SSN in floating dock (visible length -
This submarine is apparently surrounded by scaffolding. Two levels of scaffolding are plainly visible along the port quarter of the submarine.

Extreme forward end of bow may be partially covered by scaffolding. The hull outline toward the stern is indistinct due to clutter caused by scaffolding. No vertical stern fin is visible, although it should be noted that the submarine is oriented along a line parallel to the sun angle - thereby precluding the observation of any significant shadow factor. Criteria utilized to establish this identification include: (1) a short sail which slopes aft to meet the deckline; (2) a visible LOA which approximates the LOA for the longer variant of the N Class; (3) the observation of a bulbous bow - similar to the other "N" Class SSN's seen at this yard on the same photography - although minus a "staybrite" belt; and (4) the absence of any missile launchers or exhaust deflectors. The sail is scaffolded along either side. A very small vertical protrusion is located just forward of an unidentified rectangular object on the after deck of the submarine. A line extends from this protrusion across to the drydock wall from which it may lead to a barge alongside the dock. (For a line drawing of items 8 and 9 above refer to Figure 4c.)

10. Rectangular service barge [redacted] 25X1
Barge contains a long rectangular superstructure at one end. Topside configuration is unlike that observed on items 1, 3, and 6.

11. "N" Class SSN (waterline [redacted] 25X1
An unidentified white object approximately [redacted] in length is located 25X1
on the deck of the submarine approximately [redacted] abaft the sail. Two possible pipes or ducts extend from this object to the side of a rectangular service barge inboard of the submarine. A large duct leads from midship section of the submarine (at a point approximately [redacted] 25X1
abaft the sail) to a small rounded yard craft berthed alongside and outboard of the submarine. Just forward of this same point on the midship area of the submarine a small white line rises from the deck of the submarine to the top of a rectangular service barge berthed inboard of the "N" Class. A small white shack (approximately [redacted] 25X1
is located on the deck of the SSN approximately [redacted] aft of the sail. 25X1
A portal crane is working on the quay by the "N" Class SSN.

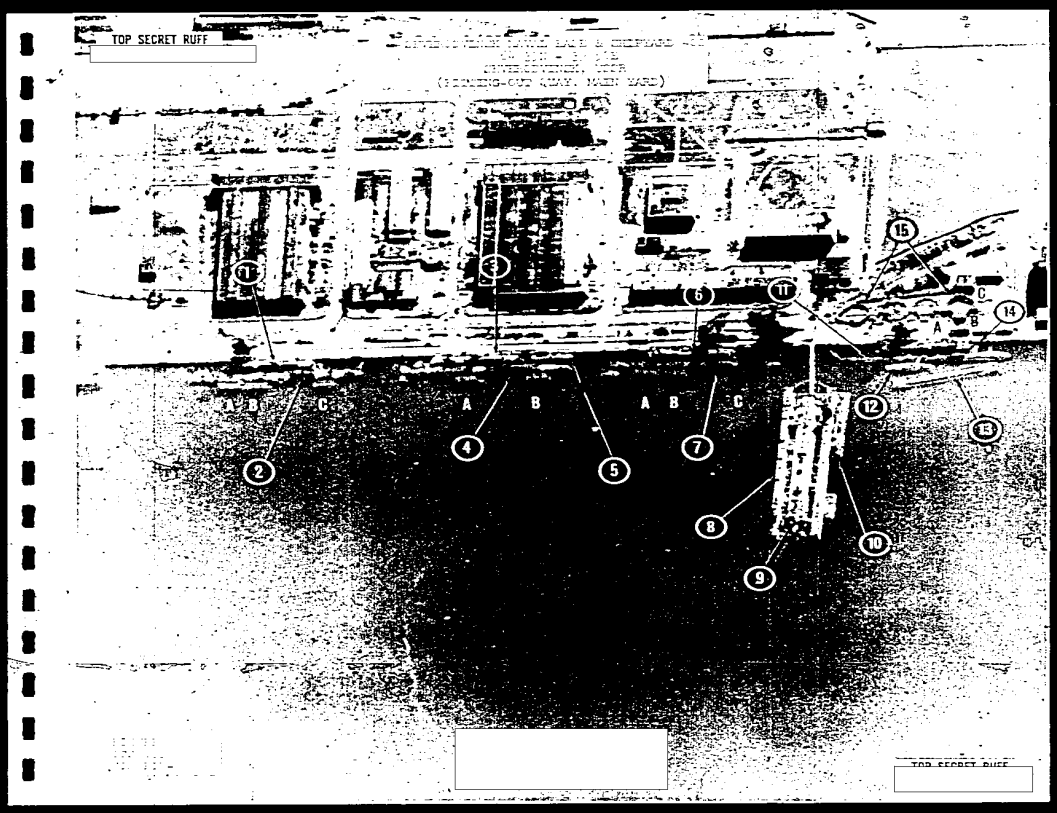
12. Unidentified small yard craft with rounded hull [redacted] 25X1
Craft appears to have a long rounded opening atop its superstructure. It is from the after end of this opening that a large white duct crosses over to the "N" Class SSN. A small deckhouse is located on the aft end of this craft.

13. Long probable catamaran-type barge (LOA [redacted] . 25X1

[redacted] 25X1

14. Rectangular service barge [redacted]
The topside features of this barge again differ from the detail visible on the other nuclear submarine service barges seen along this quay. Two large possible ducts appear to connect the inboard edge of the barge to an elevated narrow rectangular structure situated on the edge of the quay. These connections are just forward (along a fore-and-aft axis) of the position where two possible pipes or ducts join this barge from the submarine. (For a detailed line drawing of items 11-14 above refer to Figure 4d.)

15. Three angular arch-like objects - each spanning a maximum (baseline) distance of [redacted] respectively (see symbols "A", "B", and "C", annotation 15, Figure 4)-and four semi-circular "frames", having maximum diameters from [redacted] placed on the quay just east of construction hall. Two of these objects (items "A"; and "B" have the same angular configuration as the two arch-shaped structures observed on the corner of the quay by the side launching way (see annotation 1, Figure 3). The maximum inner distance between the angular extensions (or "legs") along the baselines of both items "A" and "B" is approximately 40 feet. Each of these two objects tapers from its baseline to a distance of approximately [redacted] across its narrowest point. The perpendicular distance from this narrowest point to the baseline is approximately [redacted] for each object ("A" and "B"). (For a detailed line drawing of items "A", "B", and "C" above see Figure 4e.)



25X1

25X1

25X1

TOP SECRET RUFF

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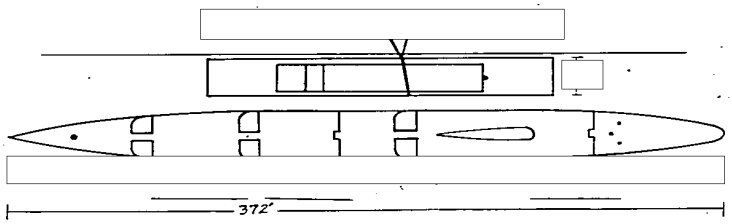
25X1
25X1

E II Class SSGN

(See annotation 2, Figure 4)

25X1

25X1



25X1

FIGURE 4a

TOP SECRET RUFF

25X1

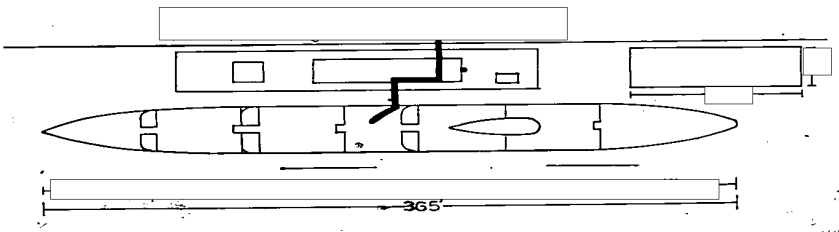
[redacted]

25X1

25X1

E II Class SSGN

(See annotation 4, Figure 4)



25X1

25X1

25X1

25X1

FIGURE 4b

[redacted]

25X1

N Class SSN
(See annotation 9, Figure 4)

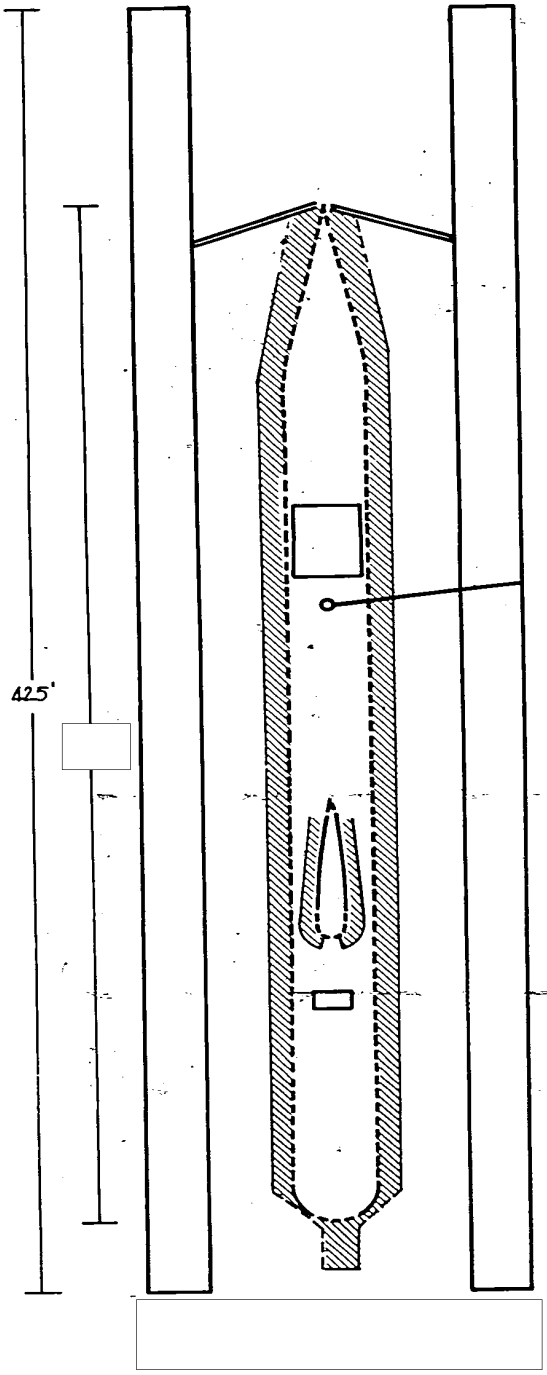


FIGURE 4c

TOP SECRET RUFF

[redacted]

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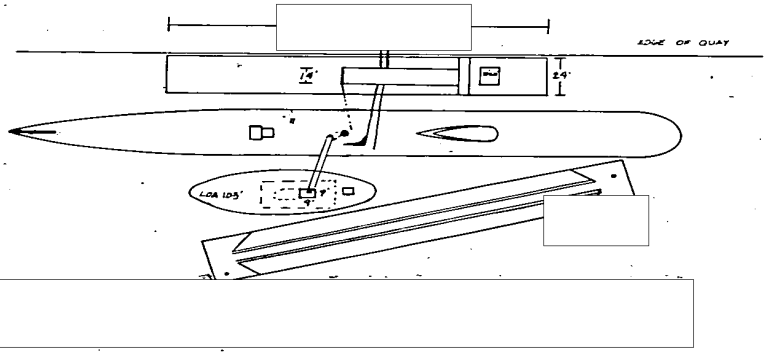
25X1
25X1

N Class SSN

(See annotation 11, Figure 4)

25X1



[redacted]

25X1

[redacted]

25X1

FIGURE 4d

TOP SECRET RUFF

[redacted]

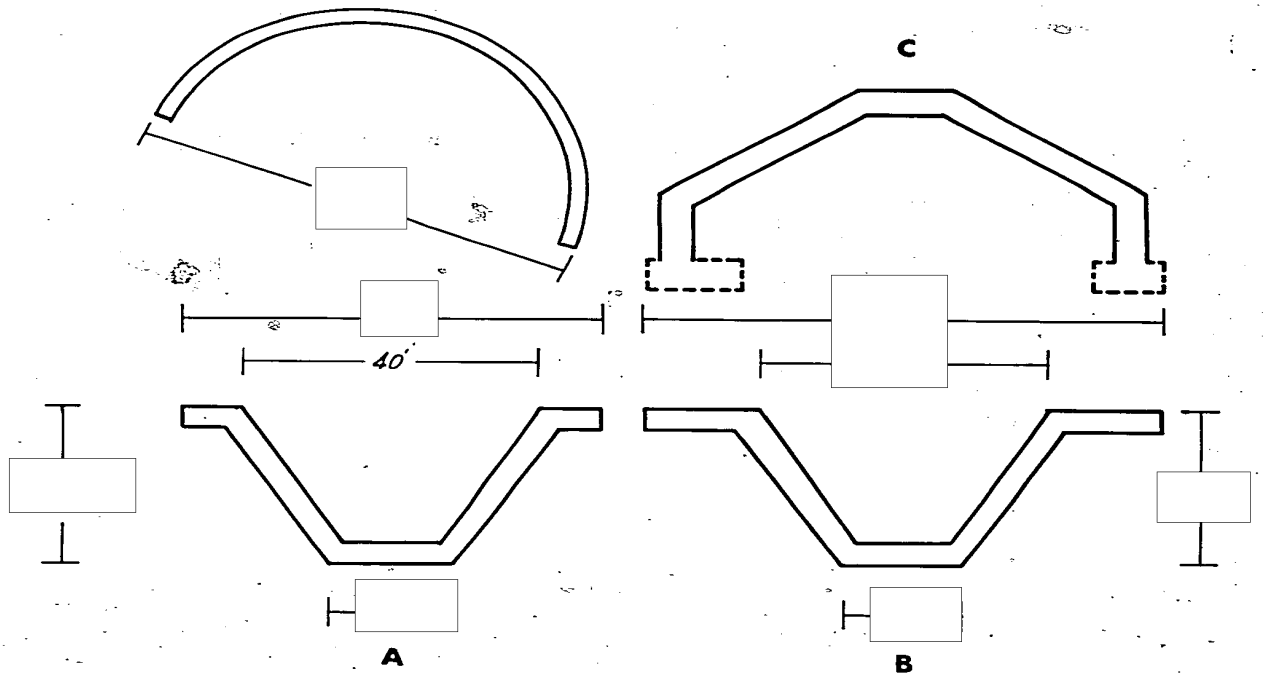
25X1

25X1

25X1

UNIDENTIFIED OBJECTS - MAIN QUAY

(See annotation 15, Figure 4)



25X1

25X1

25X1

25X1

FIGURE 4e

25X1

25X1

25X1

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25X1

SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 39-50E

KEY TO ANNOTATIONS ON FIGURE 5

1. "J" Class SSG (waterline length waterline beam 25X1
Exhaust port covers are removed exposing the after missile launcher deflectors. (For a line drawing of this submarine see Figure 5a.)

2. Unidentified auxiliary 25X1

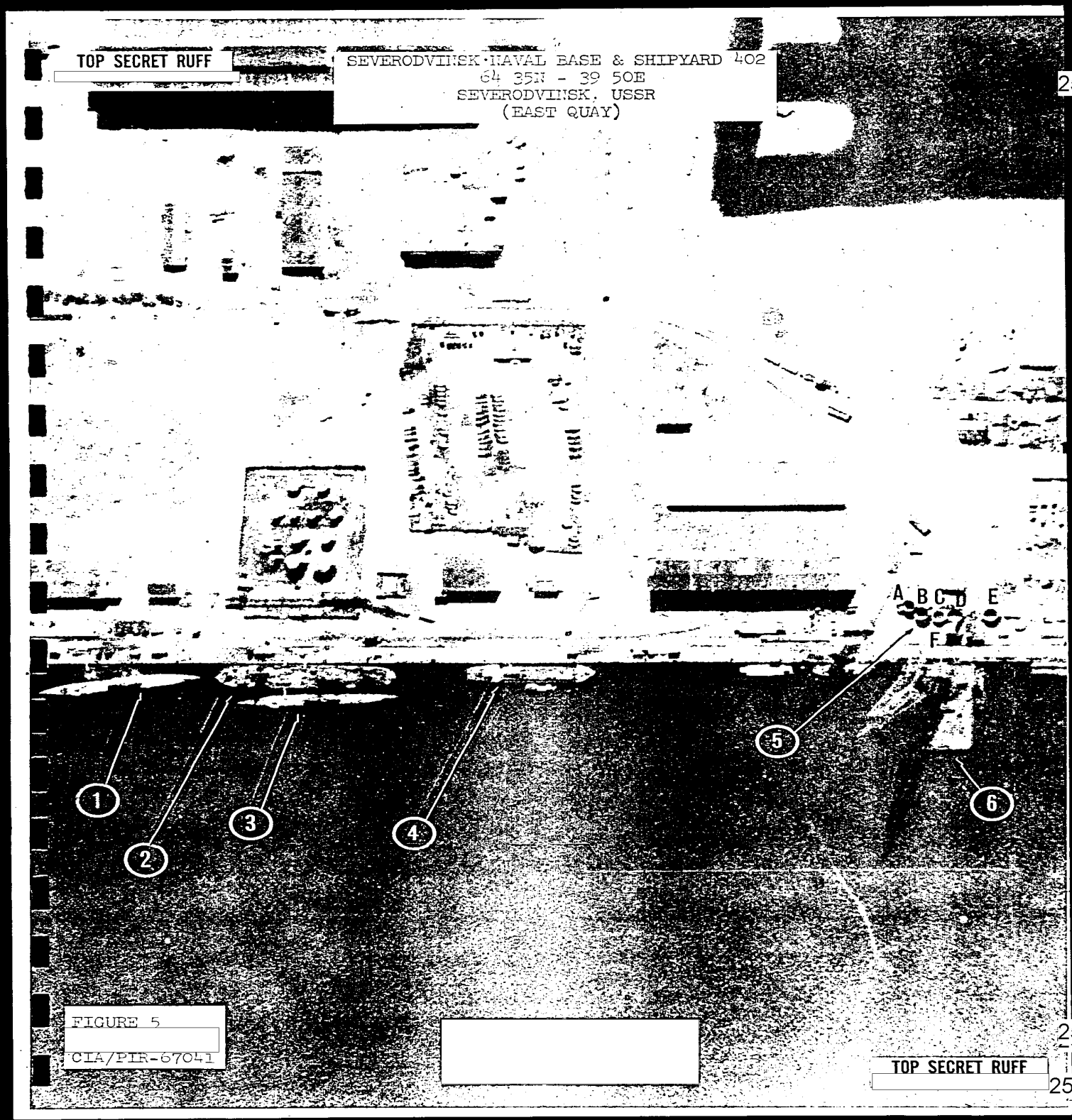
3. "J" Class SSG (waterline length 25X1
Exhaust port covers are removed from the after set of deflectors.

4. Unidentified stack aft cargo ship 25X1

5. Six cylindrical sections.
Based on size, shape and their general location (at a submarine producing shipyard) the most logical identification which can be given to these sections is that they are submarine hull sections. Five of these cylindrical sections (items A through E, annotation 5) are stowed in an upright position: one section (item F, annotation 5) is resting along its longitudinal axis. Section "C" has a wider rim than the other sections. Within this rim at least ten small holes are visible. Section "F", the section lying on its side, is apparently slightly tapered toward one end. Approximate dimensions for each of these six cylindrical sections are as follows:
Section "A" -
Section "B" -
Section "C" -
Section "D" -
Section "E" -
Section "F" - 25X1
(For a line drawing of these objects see Figure 5b.)

6. Very large floating crane (approximate platform dimensions - 25X1
This crane appears to have sufficient lift capability and reach adequate to hoist any of the six cylindrical sections (annotation 5 above) from their present location.

25X1



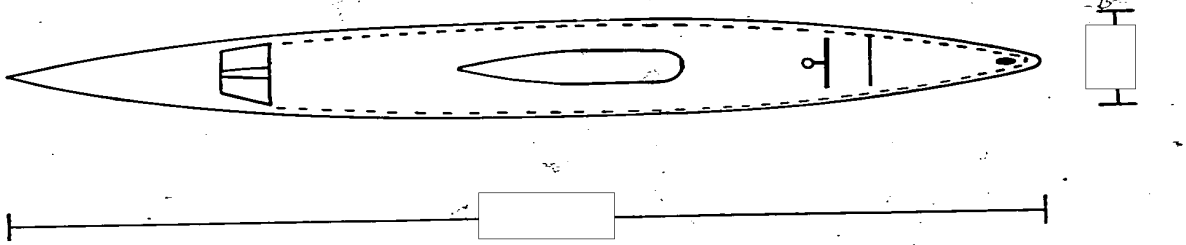
25X1

25X1

J Class SSG

(See annotation 1, Figure 5)

25X1



25X1

25X1

FIGURE 5a

25X1

TOP SECRET RUFF

[redacted]

25X1

25X1

CYLINDRICAL OBJECTS - EAST QUAY

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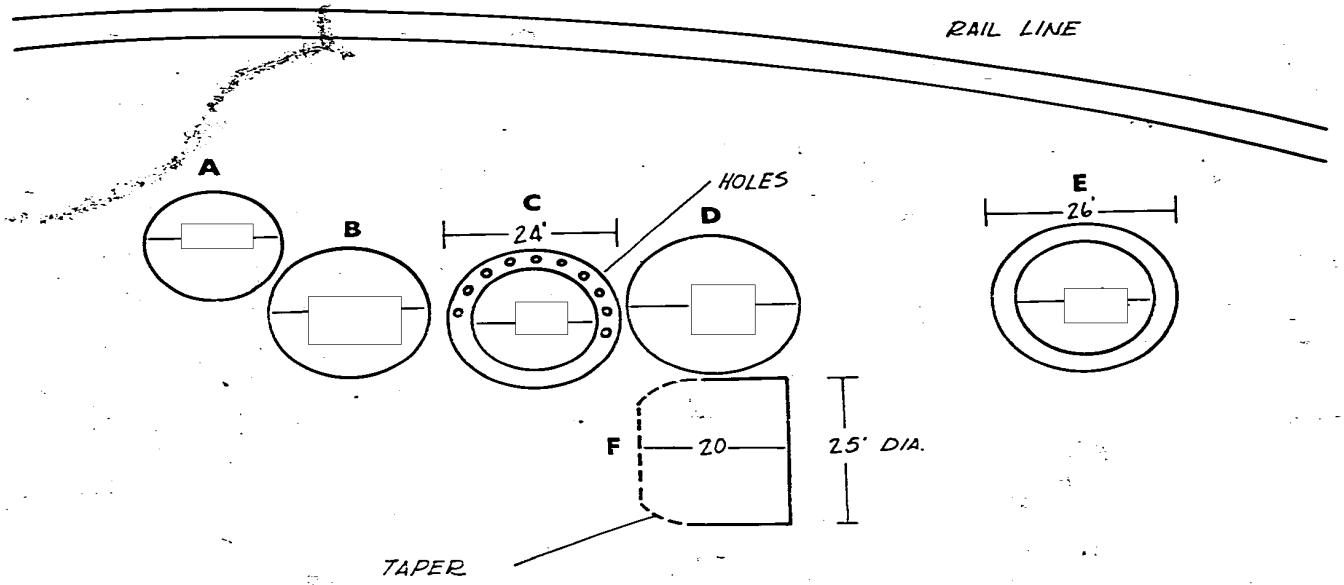
(See annotation 5, Figure 5)



25X1

25X1

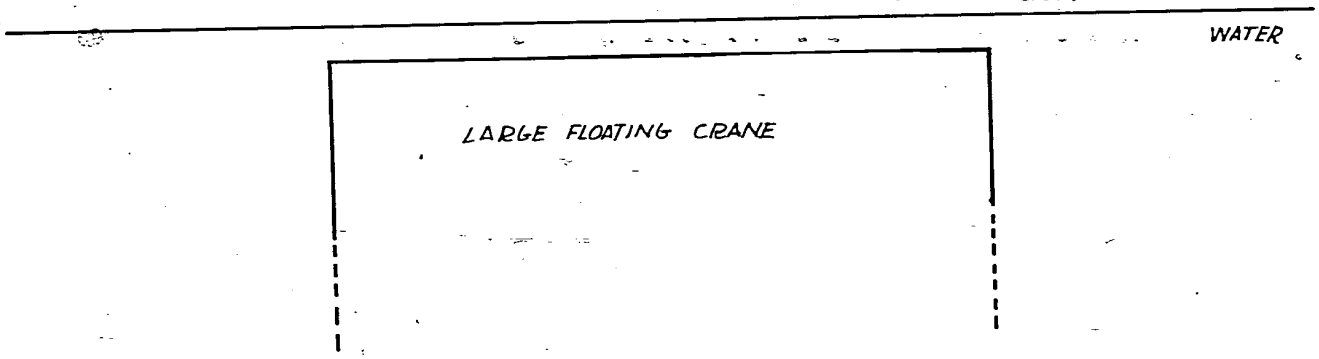


FIGURE 5b

TOP SECRET RUFF

[redacted]

25X1

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SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 39-50E

KEY TO ANNOTATIONS ON FIGURE 6

1. Probable "PO-2" Class YAG

2. Probable "P-6(T)" Class target boat

3. RIGA Class DE

4. Two unidentified probable YP

5. "G" Class SSB (waterline LOA approx 315').
Outer housing has been removed from the after two-thirds of the sail exposing the three missile tubes. The uppermost section of the forward part of the sail may also be removed. Height of forward part of sail is approximately above the deck although shadow factor from which this dimension is derived is less than optimum. Height of each of the three missile tubes (based on good shadow factor) is approximately four feet. is the distance measured from the top of each of the tubes to the topside deck level of the submarine. The extremities of each of these tube shadows terminate on what appears to be the nearly flat deck surface upon which the outer sail housing to the missile compartment would normally be positioned.) From a U.S. Navy PIC scale drawing of the "standard "G" Class SSB it would appear that the height of the tubes above deck level is no less than or approximately higher than the height of the tubes observed on this "G" Class. Additional photographic evidence of probable modification to the missile system aboard a "G" Class SSB has been sighted at Shipyard 202, Vladivostok, USSR (43-07N 131-55E) where an entire sail was observed to have been removed. (See CIA/IAD/PIR-7037/65 of KH coverage of Vladivostok taken A detailed line drawing of the "G" Class SSB at Severodvinsk is included as Figure 6a to this report.

6. Modified LENTRA Class EAG

7. BUSSARD Class AKL

8. Unidentified possible LCU

9. Two possible "PO-2" Class YAG

10. Transporter dock.
Approximate dimensions for this dock are as follows: LOA (to bow ex-

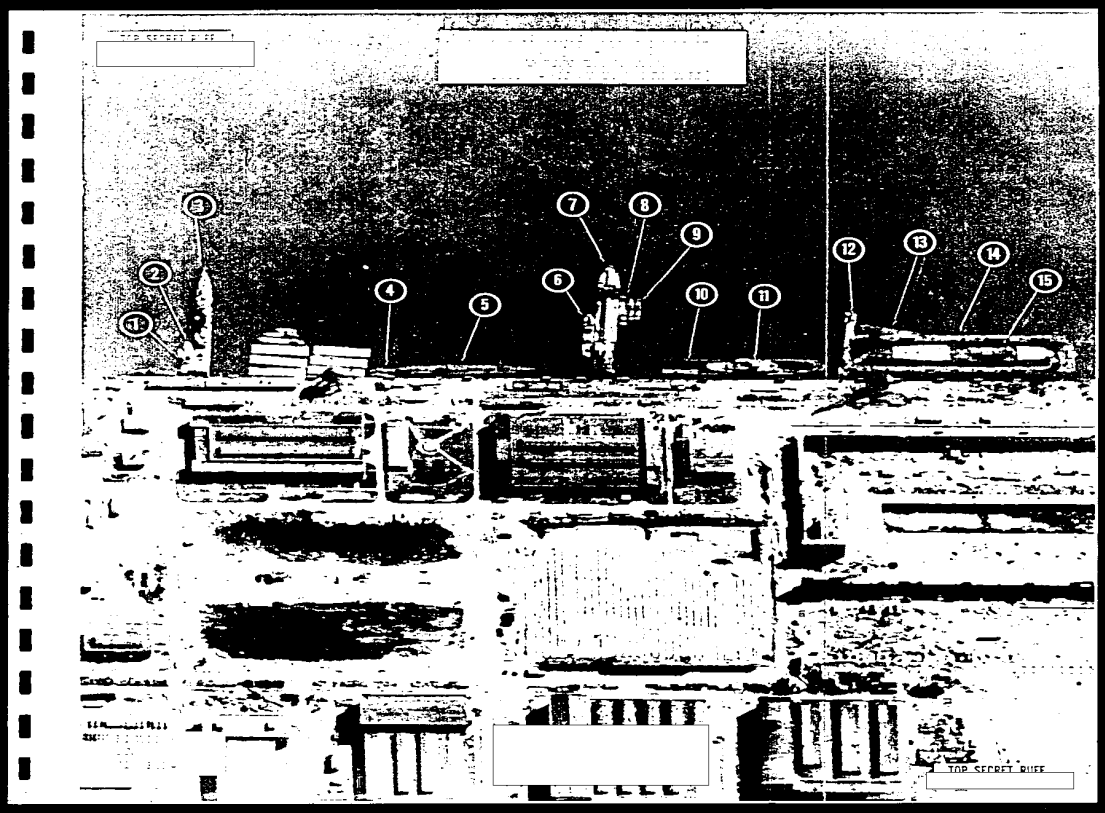
11. OKHTENSKIY Class ATR in transporter dock

12. Rectangular service barge
Barge contains one long and one small structure topside; in appearance it most closely resembles the service barge inboard of the E-II Class SSGN observed at the Nuclear Submarine Special Support Facility, Yagry Island (see annotation 3, Figure 8).

13. Unidentified vessel

14. Large floating dock.
Approximate dimensions for this dock are as follows: LOA of walls - maximum (outer) width - inner dock width - . A small crane is visible on top of each wall of the dock.

15. "H" Class SSBN in floating dock.
The vertical stern fin and three ballistic missile tubes/caps on top of the after part of the sail are plainly visible. The distance between the aftermost edge of the stern fin and the leading edge of the shed extension over the bow of the submarine is approximately . The submarine LOA is probably slightly less than since the bow shed extension does not appear to be placed directly in line with the centerline axis of the submarine. The slant range distance between the after edge of the stern fin to the after edge of the aftermost missile tubes is approximately The after sail housing abaft the missile tubes has been removed as have the uppermost side panels on either side of the missile tube compartment. Temporary structures or sheds cover the forward section of the submarine from just forward of the sail to the bow - and a large area of the ship between the stern fin and a point approximately from the stern. The minimum width amidships is approximately - although this includes an undetermined width of probable scaffolding along each side of the submarine. The height (determined from shadow) visible on the dock floor) from the top of the vertical stern fin to the dock floor is roughly (For a detailed line drawing of items 12-15 above see Figure 6b.)



25X1

25X1

25X1

25X1

25X1

G Class SSB

(See annotation 5, Figure 6)

25X1

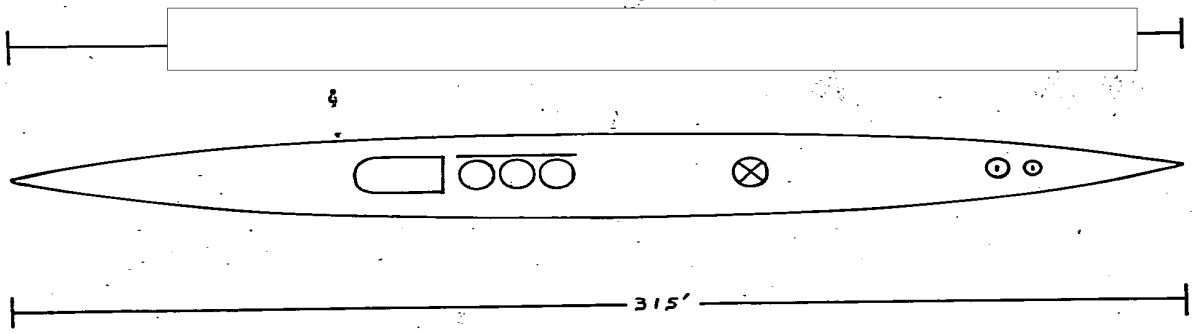


FIGURE 6a

25X1

TOP SECRET RUFF

CIA/PIR-67041

H Class SSBN

(See annotation 15, Figure 6)

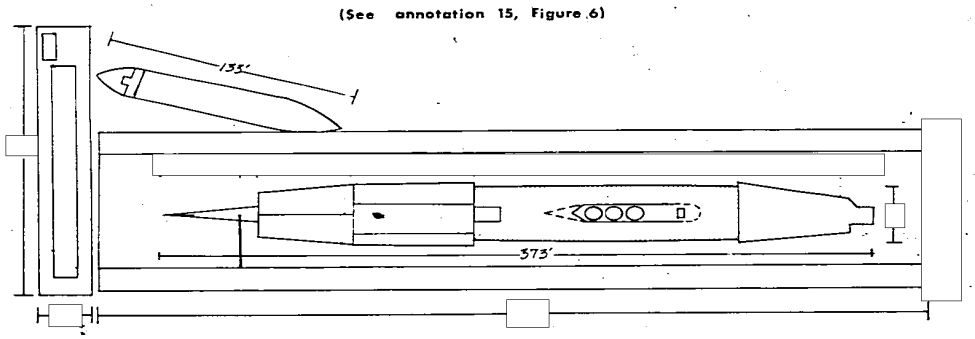


FIGURE 6b

TOP SECRET RUFF

25X1
25X1
25X1
25X1
25X1
25X1
25X1

25X1

SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 39-50E

25X1

KEY TO ANNOTATIONS ON FIGURE 7

1. Four probable NYRYAT-2 or NYRYAT-3 Class YDT

25X1

2. Inboard - unidentified probable YP (
   Outboard - possible "PO-2" Class YAG

25X1

3. SEKSTAN Class ADG

4. LIBAU Class AGCL (

25X1

5. Probable "PO-2" Class

6. Possible VIP barge (I

25X1

7. Two RIGA Class D

8. BOLVA Class APL

25X1

TOP SECRET RUFF

SEVERODVINSK NAVAL BASE & SHIPYARD 402
64 35N - 39 50E
SEVERODVINSK, USSR
(NAVAL BASE YAGRY ISLAND)

25X1

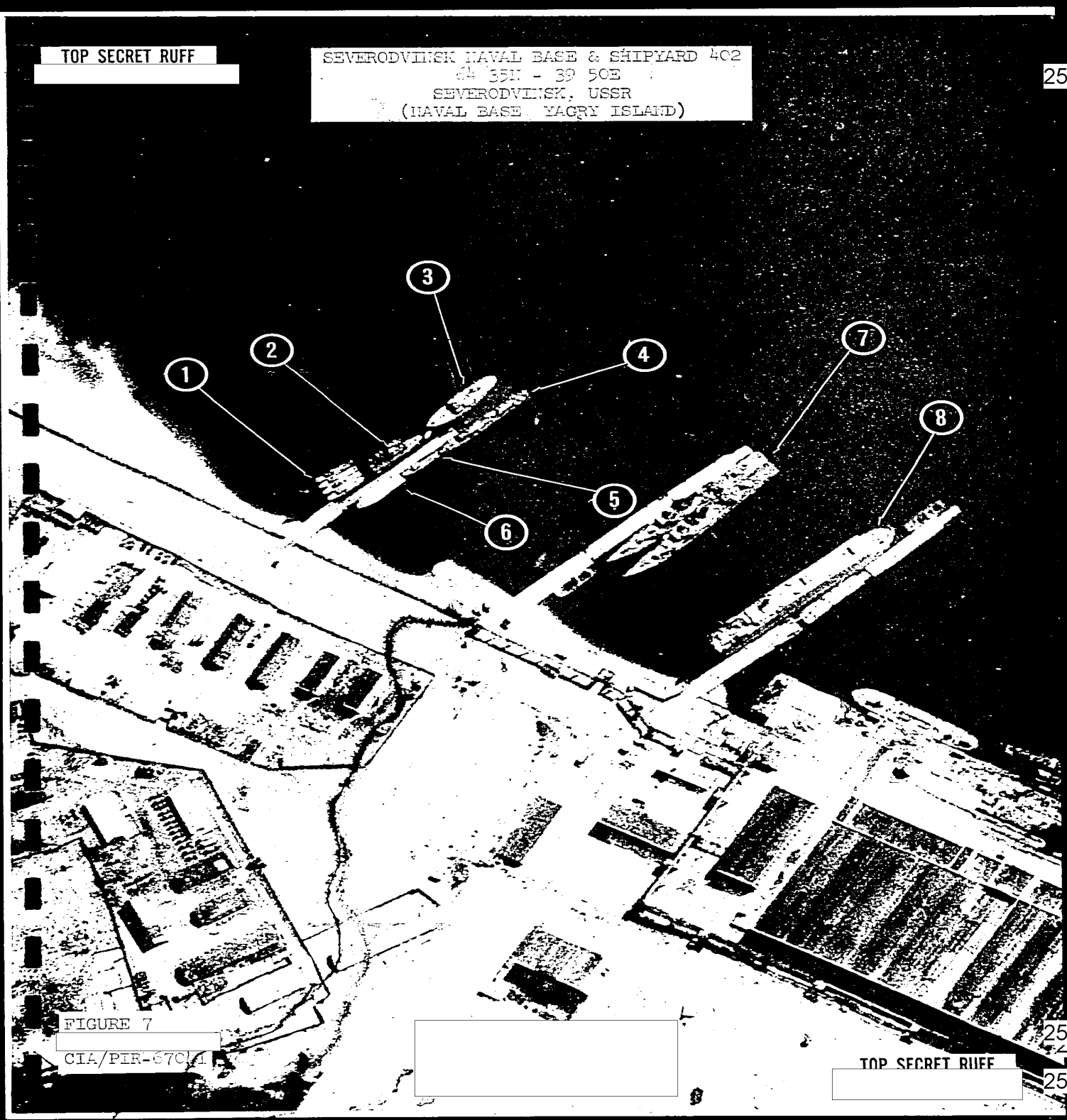


FIGURE 7

CIA/PIR-67C/1

25X1

25X1

TOP SECRET RUFF

25X1

SHIPYARD : NAVAL BASE AND SHIPYARD 402
LOCATION : SEVERODVINSK, USSR
GEO COORDS: 64-35N 39-50E

KEY TO ANNOTATIONS ON FIGURE 8

1. Unidentified probable auxiliary
Vessel has unique appearance with hull configuration raised 1-3. Raised extremities at either end of this vessel are each a little more than one quarter of the length of the vessel and contain very little topside superstructure. Depressed center section does not appear to equate to that of either a cargo ship or an oiler. Similar vessel was observed nested alongside probable "PM-124" outboard of the N Class SSN at this same facility (the Nuclear Submarine Special Support Facility)

2. "E-II Class SSGN
This submarine appears to have all missile tube launchers and sail removed. Bow configuration and widening of deck in region where sail is normally placed contribute toward this identification. Submarine is apparently encased within a framework or jacketing device which begins approximately 35 feet from the bow and ends approximately from the waterline stern. A possible rescue buoy is visible on the deck over the approximate location of the forward seating ring. A box-like structure, approximately on a side, is located on the submarine in a position where the forward part of the sail normally is seen. An unidentified rectangular structure, approximately in length, is visible between the positions of the second and third sets of missile launchers. The leading edge of this structure is placed approximately from the bow of the submarine. An unidentified linear "duct-like" object is placed diagonally across the forward half of long rectangular structure. A small rectangular object is placed on the after starboard corner of the long rectangular structure. A quayside portal crane is working by the after half of the submarine.

3. Probable decontamination (DECON) radio-active control (RADCON) barge
At least one possible vent is visible on top of the amidship barge superstructure (dimensions of superstructure - approximately Three very faint lines, possibly pipes, are visible leading from the barge to rectangular structure located on the E-II SSGN between the positions of the second and third sets of missile

launchers. A small white shack [redacted], similar to that seen abaft the sail of the "N" Class SSN at this same facility (see annotation 4, Figure 8), is located on one end of the barge. (For a detailed line drawing of items 2 and 3 above see Figure 8a.)

4. "N" Class SSN (waterline [redacted]) A white shack [redacted] is located approximately [redacted] abaft the after edge of the sail. A rectangularly shaped probable hull opening [redacted] is located approximately 65 feet aft of the sail.

5. Probable DECON/RADCON barge [redacted] Three probable vents are visible atop the amidships barge superstructure (dimensions of barge superstructure - approximately 135' x 15'). This barge is virtually identical to the probable DECON/RADCON barge servicing the E-II SSGN at this facility (see annotation 3, Figure 8). At least three possible pipes are angled from the barge to an area on the N Class SSN just abaft the white shack aft of the sail. Three additional faint lines, possibly pipes, are visible through the shadows between the barge and the white shack on the "N" Class.

6. Unidentified harbor craft [redacted]

7. "PM-124" AG [redacted] Topside detail and proportions are identical to "PM-124" described in PC 230/2-1 (Naval Ships of the USSR) although LOA differs [redacted] from preliminary estimate of approximately 250'. Because "PM-124" carries unique cranes identical to those aboard the LEPSE AG, a nuclear waste disposal ship associated with the LENIN Class AGB, it is believed that this ship most likely also has a similar nuclear waste disposal function. (For a detailed line drawing of items, 4, 5 and 7 above see Figure 8b.)

8. TOPLIVO-3 Class YO [redacted]

9. High, uniquely configured structure - apparently mounted (and mobile) on quayside craneway. Structure consists of a square-shaped housing mounted on supports spanning the craneway. A small object protrudes from the top of this structure. This structure resembles the "M-130" houses used at United States Navy Yards to load spent nuclear fuel elements into containers prior to shipment to reclaiming plants. The white shed on the "N" Class SSN and this structure on the quay would both be within the working radius of the portal crane by the "E-II" Class SSGN were it to

be positioned on the craneway at a point equidistant from these two objects. There is as yet no rail line along this quay, but a spur line is observed under construction from the repair facility, Yagry Island (Figure 6), toward the southwestern end of Yagry Island (Figures 7 and 8).

NOTE: The establishment of nuclear submarine refueling (recoring) as a major function of this facility is based upon the following evidence.

a. An "E" and an "N" Class nuclear submarine - one with a framework along the outer hull, the other with a white shed abaft the sail - have both been sighted at this facility over a four and one-half month time period . It is quite likely in view of the similarities of position and topside detail that these are, in fact, the same two submarines, thereby indicating a probable maintenance evolution of some magnitude.

b. Extensive possible piping or ductwork leads from the two nearly identical service barges to the probable location of the reactor area aboard each of these two submarines. Possible vents atop each of the barges provide further evidence to support their identification as probable DECON/RADCON barges.

c. The eight large cylindrical tanks under construction (only four of which are visible on this coverage) are similar in layout to radioactive waste storage facilities described in Soviet open source literature.

d. The possible "M-130" type structure is located in the most suitable position for the quayside portal crane to work between it and the probable location of the reactor area aboard the "N" Class SSN.

e. The unique cranes aboard the "PM'124" are identical to those aboard the LEPSE AG - a nuclear waste disposal ship.

f. Inner security fencing is visible along the quay by both submarines. This is in addition to the security fencing surrounding the entire facility.

g. Observations paralleling subparagraphs "a", "b", "d", and "f" above have been noted at recoring facilities utilized by United States nuclear submarines.

TOP SECRET RUFF

25X1

SEVERODVINSK NAVAL BASE & SHIPYARD 402
64 35N - 39 50E
SEVERODVINSK USSR
(NUCLEAR SUBMARINE SPECIAL
SUPPORT FACILITY)

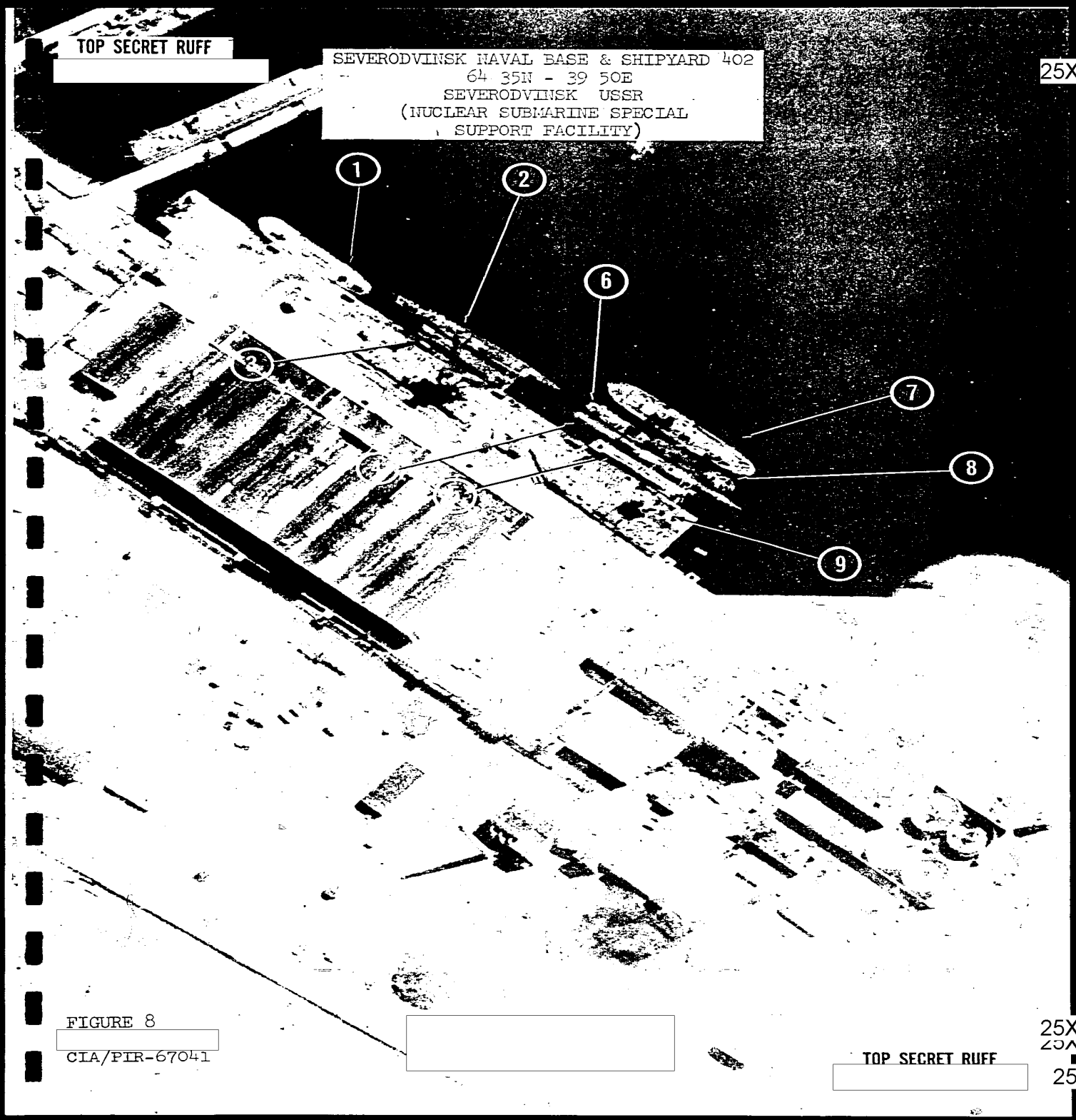


FIGURE 8

CIA/PIR-67041

25X1

TOP SECRET RUFF

25X1

25X1

E II Class SSGN

(See annotation 2, Figure 8)

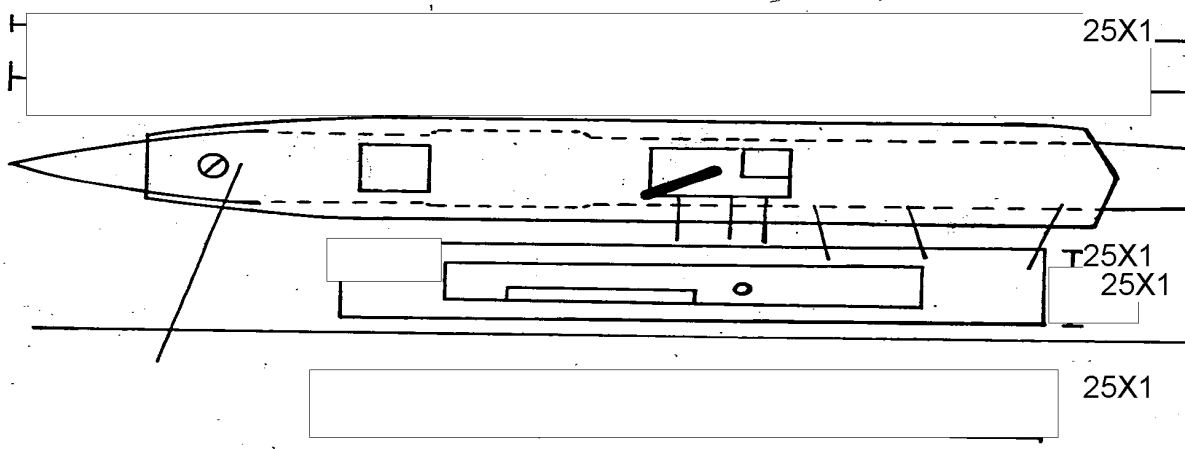


FIGURE 8a

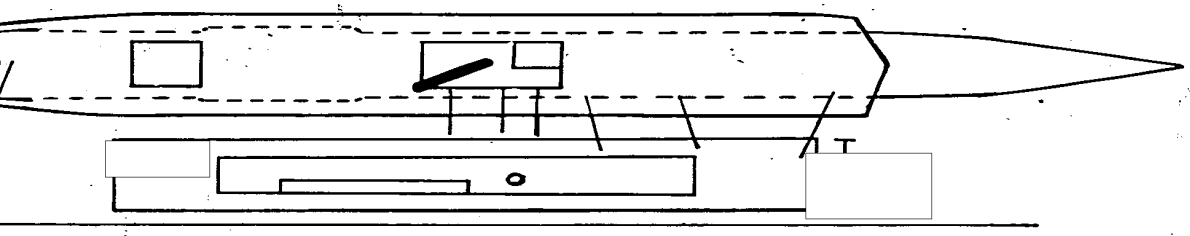
25X1

CIA/PIR-67041

E II Class SSGN

(See annotation 2, Figure 8)

25X1



25X1

25X1

FIGURE 8a

TOP SECRET RUFF

25X1

25X1

N Class SSN

(See annotation 4, Figure 8)

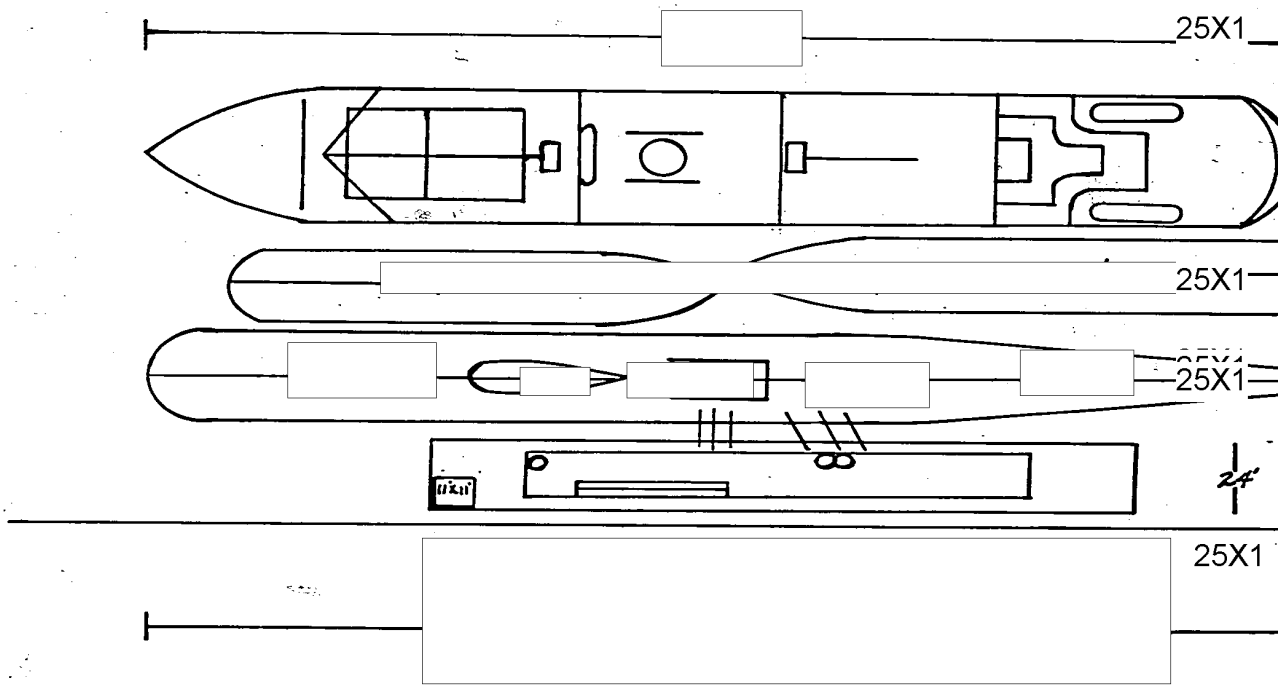


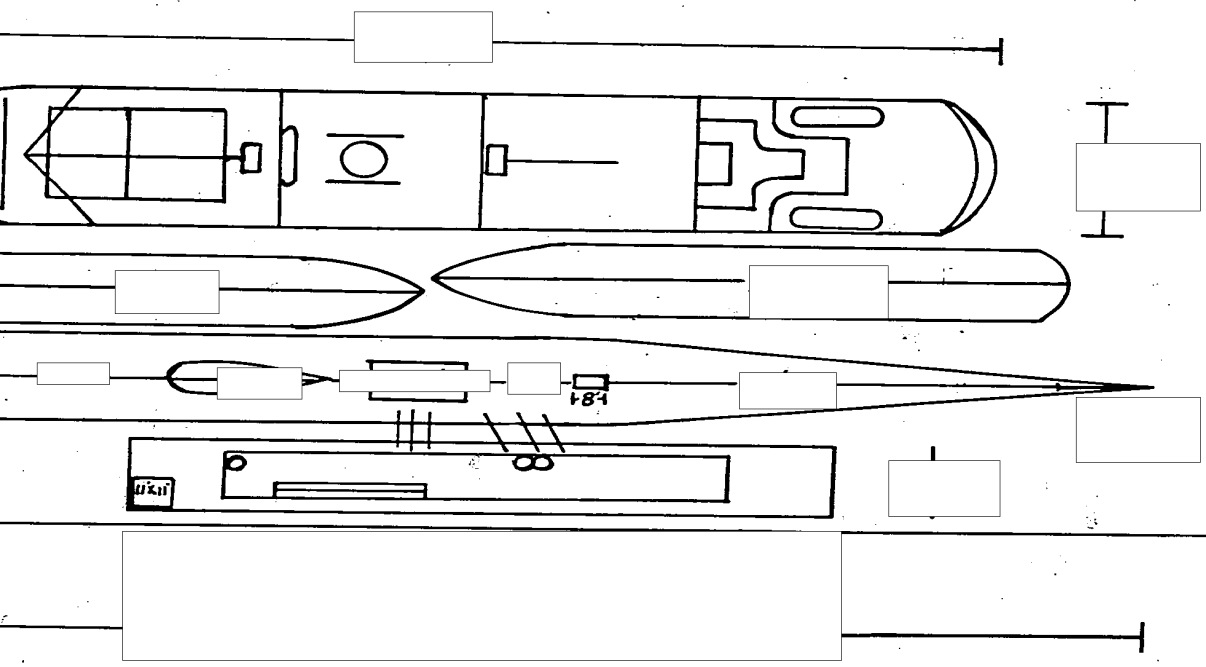
FIGURE 8b

[redacted] 25X1

CIA/PIR - 67041

N Class SSN

(See annotation 4, Figure 8)



25X1

25X1

25X1

25X1

25X1

25X1

25X1

FIGURE 8b

TOP SECRET RUFF

[redacted] 25X1

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REQUIREMENT

C-RR5-82,538

CIA/IAD PROJECT

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[redacted] 25X1